

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Confirm. No.: 9844

BACKLUND

Atty. Ref.: 2380-1292

Serial No. 10/500,308

TC/A.U.: 2143

Filed: March 11, 2005

Examiner: Fearer, M.D.

For: METHOD AND APPARATUS RELATING TO
RETRANSMISSION OF DATA BETWEEN DIFFERENT
PROTOCOL LAYERS

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December 23, 2009

BOX AF

Commissioner for Patents
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Sir:

PRE-APPEAL BRIEF REQUEST FOR REVIEW

The Advisory Action issued December 8, 2009 for the above-identified application indicates that the Amendment filed on November 20, 2009 has been entered, but that the rejections set forth in the October 2, 2009 Office Action have been maintained. Applicant requests that the pending rejections be reconsidered and withdrawn in view of the following remarks.

Claim 1 is directed to a method of communicating data within a data communication system. Claim 1 includes steps of transmitting, from a higher layer transmitting protocol entity, a protocol data unit to a lower layer transmitting protocol entity. Claim 1 further recites receiving, in the higher layer transmitting protocol entity, a transmission result from said lower layer transmitting protocol entity, said transmission result reporting the result of the transmission of the protocol data unit by said lower layer transmitting protocol entity. Finally, claim 1 recites deciding, responsive to the transmission result, whether the higher layer transmitting protocol entity should re-

provide the lower layer transmitting protocol entity with the protocol data unit. Claim 1 recites that the higher layer transmitting protocol entity does not re-provide the protocol data unit to the lower layer transmitting protocol entity until after it has received the transmission result.

It is important to understand what is being communicated to the higher layer transmitting protocol entity in the “transmission result.” In a typical prior art data communication scheme, one would expect the transmission result to report whether the data unit was successfully received by the lower layer transmitting protocol entity. But that is not what is recited in claim 1. Instead, the “transmission result” recited in claim 1 reports whether the lower layer transmitting protocol entity has successfully transmitted the data unit on to a third entity. This is why the language of claim 1 recites that the transmission result reports the result of the transmission of the protocol data unit by said lower layer transmitting protocol entity.

Applicant also notes that the method recited in claim 1 handles the re-transmission of data in a way that is different from traditional data communications schemes. In traditional data communications schemes, the higher layer transmitting protocol entity would send a data unit to the lower layer transmitting protocol entity, and it would wait to receive an acknowledgement message from the lower layer entity indicating that the lower layer entity has received the data unit. If no acknowledgment message is received after a predetermined period of time has elapsed, the higher layer entity assumes that the data unit was not received by the lower layer entity, and the higher layer entity will re-send the same data unit to the lower layer entity. But this is not what is recited in claim 1.

Claim 1 specifically recites that the higher layer transmitting protocol entity does not re-provide the protocol data unit to the lower layer transmitting protocol entity until after it has received the transmission result. This means that no re-transmission of a data unit can occur until the higher layer transmitting protocol entity has received a message from the lower layer transmitting protocol entity.

The Office Action rejects claims 1-5, 7, 8, 10-13 and 22-30 under 35 USC §103(a) over US Patent No. 6,728,208 to Puuskari, in view of US Patent Publication No. 2003/0018793 to Mora.

The Puuskari reference discloses a method of communicating data within a data communications system. Puuskari indicates that one or more of the elements of the data communication system may be capable of re-transmitting data. However, Puuskari fails to disclose or suggest any methods wherein a higher layer transmitting protocol entity waits to receive a transmission result from a lower layer transmitting protocol entity, and wherein the higher layer transmitting protocol entity does not re-provide data units to the lower layer transmitting protocol entity until after it has received the transmission result. Puuskari fails to disclose or suggest any details of the retransmission of data units, let alone a method wherein retransmission of data units is not performed until a transmission result has been received from the lower layer transmitting protocol entity. In fact, the Office Action admits that Puuskari does not disclose these features.

The Office Action asserts that the Mora reference discloses the features missing from Puuskari. Applicant strongly disagrees.

The Mora reference discloses a method of communicating data packets between two systems in a network. In Mora's communication scheme, two different communications protocols are possible. If the message to be sent from the first system to the second system is short, and can be encapsulated in a single data packet, the data is sent in a single data packet, and no attempt is made to ask for acknowledgment from the receiving system that the data has been received.

If the message to be sent from the first system to the second system is longer, and must be transmitted in multiple data packets, then the first system will ask the second system to acknowledge receipt of each data packet. This is accomplished by the second system sending the first system an acknowledgment message each time that a data packet is received.

Mora explains that when acknowledgment of receipt is requested, each time that the first system sends a data packet to the second system, the first system will set a timer

and the timer begins running once the data packet has been sent. If the first system does not receive an acknowledgment of receipt message from the second system before the timer runs out, the first system will assume that the data packet was lost, and the first system will automatically re-send the same data packet to the second system. This process will repeat itself until an acknowledgement message is finally received from the second system, or until the retransmission has occurred a predetermined number of times. See Mora at paragraphs 9, 10 and 90.

In view of the foregoing, it is respectfully submitted that Mora fails to disclose a method as recited in claim 1, where a higher layer transmitting protocol entity does not re-provide the protocol data unit to the lower layer transmitting protocol entity until after it has received a transmission result from the lower layer transmitting protocol entity. Instead, Mora deliberately re-sends a data packet without waiting to receive an acknowledgment message from the lower layer transmitting protocol entity. In other words, Mora operates exactly opposite to the method recited in claim 1.

Moreover, both Mora and Puuskari fail to disclose or suggest methods where the message being sent from the lower layer transmitting protocol entity back the higher layer transmitting protocol entity provides an indication of whether the lower layer transmitting protocol entity has successfully transmitted a data unit on to yet a third entity. Instead, both Puuskari and Mora describe methods where the message being sent from the lower layer transmitting protocol entity back the higher layer transmitting protocol entity provides an indication of whether the lower layer transmitting protocol entity has successfully received a data unit.

In view of all of the foregoing, it is respectfully submitted that Puuskari and Mora both fail to disclose or suggest a method as recited in claim 1. Accordingly, it is respectfully submitted that claim 1 is allowable. Claims 2-5, 7, 8 and 10-13 depend from claim 1 and are allowable for the same reasons, and for the additional features which they recite.

Claim 22 is directed to a computer readable medium storing computer software that causes higher and lower layer transmitting protocol entities to perform a method that

is highly similar to the method recited in claim 1. Thus, it is respectfully submitted that claim 22 is allowable over Puuskari and Mora for all the reasons set forth above in connection with claim 1. Claims 23-30 depend from claim 22 and are allowable for the same reasons, and for the additional features which they recite.

In view of the foregoing, withdrawal of the rejection of claims 1-5, 7, 8, 10-13 and 22-30 is respectfully requested.

Respectfully submitted,
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